



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,429	10/01/2003	Hiroki Tawa	107348-00369	5656

7590 03/01/2005

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
Suite 400
1050 Connecticut Avenue, NW
Washington, DC 20036-5339

EXAMINER

BASINGER, SHERMAN D

ART UNIT	PAPER NUMBER
----------	--------------

3617

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,429

Applicant(s)

TAWA ET AL.

Examiner

Sherman D. Basinger

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/1/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS filed 1/15/04.

DETAILED ACTION

Oath/Declaration

1. The declaration filed under 37 C.F.R. 1.63 in response to the notice of a missing or unsigned declaration has been received.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Okamoto.

See figure 3 where the pump is 112, the exhaust jacket is 84, the block is 46, the head is 44 and the thermostats are 128 and 130. Note that coolant first flows through the exhaust jacket then in a separate manner to the block and to the head. The coolant deliver to the block first passes through the exhaust jacket.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Tsunoda et al.

Okamoto does not disclose that the cooling water is delivered to the head through the lowest part of the head, and through an inlet provided in mating surfaces of the head and block. Note in Tsunoda et al figure 3 that at least one cooling water inlet into the head 34 is at the lowest part of the head and at an inlet provided in mating surfaces of the head 34 and the block 33. Note that this inlet receives water directly from the pump, said water not passing through the block coolant jacket first. This inlet is at the bottom of 52A of Tsunoda et al. In view of this inlet, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to delivered to the head of Okamoto through the lowest part of the head, and through an inlet provided in mating surfaces of the head and block the cooling water. Motivation to do so is to avoid having to provide an external conduit to deliver water to the block and head. One conduit can deliver water to the block, the water then being delivered to the head through the block and before it passes through the cooling jackets of the block.

6. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Irwin et al.

In Okamoto the exhaust passage cooling water temperature sensor is 116. A cylinder head cooling water temperature sensor is not disclosed by Okamoto. However, note the sensors 124 and 126 of Irwin et al. It would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide to the cylinder head of Okamoto a sensor similar to either 124 or 126 of Okamoto so as to be a cooling water temperature sensor in the cylinder head cooling water jacket. Motivation to do so is to better control the cooling of the head.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawasaki et al is cited to show figure 10.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 703-308-1139. The examiner can normally be reached on M-F (6:00-2:30 ET)/5:30-2:00(after 4/11/05).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/674,429
Art Unit: 3617

Page 5



Sherman D. Basinger
Primary Examiner
Art Unit 3617

2/25/05

Friday, February 25, 2005